In spite of this potential, however true, satellite broadband deployment to date has been minimal. According to the *Second Report*, high speed services over satellite as of 1999 accounted for less than 50,000 lines, with none of these lines satisfying the Commission's definition of advanced services due to the limited upstream capabilities of these facilities.[96] ECC and Hughes have made reasonable progress compared to that baseline with early-entry interactive Ku-band broadband products. However, to date, only one percent of DBS subscribers has purchased high-speed satellite data services. The current consumer costs for these products, including equipment and monthly fees, given the low market penetration and lack of economies of scale, place them out of reach for many consumers, and make them less competitive with terrestrial offerings that offer bundled video and IP services in one package.[97]

As the Commission has recognized, the future of truly seamless satellite broadband communications lies with the deployment of next-generation systems in the Ka-band. The Commission has licensed these systems in the hope that they would usher in "a new age in satellite communications" by providing "a wide variety of broadband interactive digital services in the United States and around the world."[98] The reality, however, is that deployment of these new satellite systems is taking longer and requiring more capital than many companies/licensees have been able to sustain. In the more than

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[96] *Id.* ¶ 111.

[97] *See* Joint Engineering Statement at 14-16.

[98] *See In the Matter of Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 12 FCC Rcd. 22310, 22310 (1997).

four years that have elapsed since the Commission's May 1997 authorization of the construction, launch and operation of Ka-band satellites in the first round of Ka-band licensing, certain licensees have encountered serious obstacles in their attempts to marshal the enormous capital and infrastructure required to construct, launch and operate satellite systems.[99] Even well-established satellite companies such as Lockheed Martin Corporation have backed away from the challenge of developing a Ka-band system, with its recent announcement that it will not invest further in its Ka-band venture, Astrolink.[100]

Each of ECC and Hughes has already made significant broadband investments and plans future deployment of additional high-speed Internet access services, but there are tremendous economic and technological hurdles that must be overcome to do so using satellites.[101] For example, in view partly of the financing community's reluctance to finance such projects, ECC's first Ka-band satellite, EchoStar 9 (to be launched in 2002), is a cautiously modest project, equipped with only a limited number of spot beams designed to serve only a few geographical areas in the United States. And while Hughes will invest approximately $1.5 billion and has already spent nearly $1 billion to begin deploying SPACEWAY system spacecraft in early 2003,[102] Hughes is not immune to downturns in the capital markets that could affect the timing of its deployment or its ability to offer competitively priced offerings. Current investments,

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[99] Global Wireless, *Pie in the Sky*, September 1, 2001.

[100] *Decision Near on Astrolink as Lockheed Ends Funding*, Communications Daily, November 1, 2001.

[101] *See* Joint Engineering Statement at 14-16.

[102] The first phase of the SPACEWAY system will consist of two satellites and one spare to serve North America.

divided between the firms, may lack the economies of scale to compete with terrestrial services, thus implying higher prices to rural communities and less competition in non-rural areas.[103]

The merger will promote exponentially the efforts of both companies to implement truly competitive next-generation broadband systems in a fashion that, absent the merger, would likely be significantly less beneficial to the public. The parties expect that the proposed transaction will allow the two companies to develop a combined critical mass of broadband subscribers to spread the tremendous fixed costs that, as noted above, have deterred other satellite companies from proceeding with broadband satellite systems. The merger will speed broadband service availability, significantly improve subscriber growth, and therefore substantially enhance the competitive position of broadband satellite services vis-à-vis cable operators that can and do offer fully bundled Internet Protocol/video packages.[104] Cross-technology competition always benefits the public. The lower prices resulting from "intermodal" competition in urban areas will also benefit rural and underserved users with lower prices.

Second, a greater breadth of service will be implemented by the combined company more rapidly than would be possible absent the combination, and thereby will reach the consuming public more quickly. Time to market is of the essence. If next-generation satellite broadband services reach the market only after cable and DSL have commanded 60% of potential broadband customers, it is not clear whether any late-coming service would be able to attract enough of the remaining customers to become

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[103] *See* Joint Engineering Statement at 14-16.

[104] *Id.*

viable. This consideration highlights the more general point, noted above, that only a narrow window of opportunity is presented for imposing heightened competitive pressure on cable before cable is able to lock in its dominant position. The fact that effective competition occurs on the basis of bundles of offerings, and that broadband is a critical element of the bundle, reinforces the point further.

The merger will also boost broadband deployment by combining the Ka-band spectrum resources available to each entity. To be competitive with cable high-speed access, a satellite broadband platform needs to be capable of supporting several million U.S. subscribers. Each of ECC and Hughes (including PanAmSat) now has access to Ka-band spectrum at 3 orbital locations (in ECC's case, only two of these slots can support a one-dish solution), but Ka-band spectrum is limited in its ability to provide ubiquitous broadband services as a result of the Commission's satellite-terrestrial sharing decisions in the 18 GHz band. Even with the most advanced technology, each orbital location can only serve a finite number of customers. The number of customers that can be served is directly proportional to the amount of spectrum that is available. By combining resources in a merged entity, ECC and Hughes will be better positioned to create a Ka-band system capable of serving the nation's broadband service requirements while effectively and competitively challenging cable modem and DSL services.[105]

In short, commercialization of the Ka-band has been a cornerstone in the Commission's laudable effort to promote rapid deployment and competition in the provision of advanced broadband services and to promote the efficient use of spectrum

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[105] *Id.*

by using the Ka-band to provide a new class of service that is simply not possible in the crowded Ku- and C-bands used for traditional Fixed-Satellite Service.[106] Approval of the proposed transaction will pave the way for the rapid deployment of a Ka-band satellite system capable of providing competitive broadband and other advanced services to all Americans, including those in rural areas, consistent with the Commission's goals and the public interest.

4. The PanAmSat Purchase Is In The Public Interest

The ECC-Hughes combination will result in a transfer of control of Hughes' controlling interest in PanAmSat, either to New EchoStar as a consequence of the merger, or through a separate purchase by ECC of Hughes' indirect interest in PanAmSat in the event the merger agreement is terminated under certain circumstances. In either event, the transfer of control of Hughes' interest in PanAmSat is in the public interest and should be approved.

As outlined above, significant benefits to consumers will result from combining the FSS resources of ECC and Hughes to bring broadband satellite services to market faster. The merger will not create any significant overlap in the provision of FSS services in the same product and geographic markets that should be of any concern to the Commission.[107] ECC does not currently provide any telecommunications services of the type provided by PanAmSat in the United States or elsewhere. While Hughes and

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[106] *See Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules,* 12 FCC Rcd. at 22312.

[107] While ECC is a potential competitor in the FSS market, there are a number of other existing domestic and international FSS service providers (*e.g.* Loral/Orion, GE/SES, New Skies, etc.) as well as new entrants.

PanAmSat own and operate a fleet of FSS satellites and associated earth stations that are utilized primarily to provide domestic and international satellite services, respectively, the Commission has already determined that the consolidation of their businesses and operations under the control of Hughes serves the public interest.[108] Moreover, the combined FSS authorizations held by all three companies do not create market power in any one company in light of the large number of FSS satellite licenses held by other non-affiliated companies.[109]

III. WAIVER REQUESTS: APPLICATION CUT-OFF RULES AND ADDITIONAL APPLICATIONS

In connection with the approval of this transaction, the parties respectfully request that the Commission waive the application of its "cut-off" rules with respect to all pending applications filed by Hughes or its subsidiaries (including PanAmSat) and by ECC for additional space station authorizations, to the extent that those applications have been the subject of an FCC cut-off notice prior to the closing date.[110]

Section 25.116 of the Commission's rules provides that any pending application will be considered "newly filed" and therefore may lose its place in a processing round if it is modified by a "major amendment" – including an amendment that specifies a substantial change in beneficial ownership or control of the applicant.[111] An amendment will not be deemed a major amendment, however, if it reflects a change

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[108] *See Hughes Comm., Inc., and Anselmo Group Voting Trust/PanAmSat Licensee Corp.*, 12 FCC Rcd. 7534 (1997).

[109] *See, e.g., TRW, Inc.*, 16 FCC Rcd. 14407 (Int'l Bur. rel. Aug. 3, 1999); *CAI Data Systems, Inc.*, 16 FCC Rcd. 14269 (Int'l Bur. rel. Aug. 3, 1999);

[110] Attachment G appended hereto provides a consolidated list of pending applications filed by Hughes and its subsidiaries and by ECC.

in ownership or control that the Commission determines is in the public interest and the Commission grants an exemption from the cut-off date.[112] The Commission has traditionally granted such exemptions where the proposed transaction will serve a legitimate business purpose and will serve the public interest.[113]

As described throughout this application, the proposed transaction serves a legitimate business purpose. By combining their satellite assets and operational resources, the transaction will enhance the combined enterprise's U.S. and global service capabilities, allowing it to compete more effectively and efficiently with dominant cable and other MVPD service providers. The transaction involves – indeed, it is primarily focused upon – operational satellites. Moreover, the applications currently pending are an integral part of Hughes' and ECC's expansion plans that were announced well before this proposed transaction and are essential to the continued competitiveness of their respective businesses. Under these circumstances, there can be no question that the transaction serves an independent business purpose and was not entered into for the purpose of acquiring the pending applications.[114] For these reasons, the Commission should exempt all currently pending applications filed by Hughes and its subsidiaries and by ECC from any applicable cut-off rules.

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[111] *See* 47 C.F.R. § 25.116(b) (2000).

[112] See 47 *C.F.R.* at § 25.116(c)(2) (2000).

[113] *See, e.g., DirectCom Networks, Inc.*, DA 01-1683 ¶ 16 (Int'l Bur. rel. Aug. 3, 2001); *Loral Space & Comm. & Orion Network Syst.*, 13 FCC Rcd. 4592, 4599, ¶ 17 (1998); *Hughes Comm., Inc. & Anselmo Group Voting Trust/PanAmSat Licensee Corp.*, 12 FCC Rcd. 7534 (1997); *AT&T Corp. & Loral SpaceCom Corp.*, 12 FCC Rcd. 925 (1997).

[114] *GE/SES*, DA 01-2100 at ¶ 56; *Loral/Orion*, 13 FCC Rcd. at 4599.

IV. SECTION 304 WAIVER

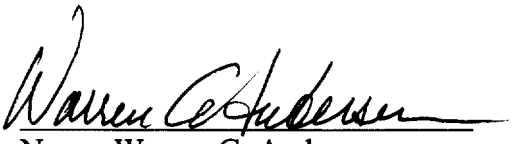
In accordance with Section 304 of the Communications Act of 1934, 47 U.S.C. § 304, the Applicants hereby waive any claim to the use of any particular frequency or of the electromagnetic spectrum because of previous use of the same, whether by license or otherwise.

V. CONCLUSION

For the foregoing reasons, the Applicants respectfully request that the Commission grant this application promptly and provide for any other authority that the Commission finds necessary or appropriate to enable the Applicants to consummate the proposed transactions.

Respectfully submitted,

GENERAL MOTORS CORPORATION

By: 

Name: Warren G. Andersen
Title: Assistant General Counsel and
Assistant Secretary

ECHOSTAR COMMUNICATIONS CORPORATION

By: _____

David K. Moskowitz
Senior Vice President and General Counsel

HUGHES ELECTRONICS CORPORATION

By: _____

Eddy W. Hartenstein
Corporate Senior Executive Vice President

ECHOSTAR COMMUNICATIONS CORPORATION

By: _____

David K. Moskowitz
Senior Vice President and General Counsel

A

Attachment A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Application of
ECHOSTAR COMMUNICATIONS CORPORATION, GENERAL MOTORS CORPORATION, HUGHES ELECTRONICS CORPORATION
Transferors,
and
ECHOSTAR COMMUNICATIONS CORPORATION
Transferee,
For Authority to Transfer Control

DECLARATION OF DR. ROBERT D. WILLIG ON BEHALF OF ECHOSTAR COMMUNICATIONS CORPORATION, GENERAL MOTORS CORPORATION, AND HUGHES ELECTRONICS CORPORATION

I. QUALIFICATIONS

1. My name is Robert D. Willig. I am Professor of Economics and Public Affairs at the Woodrow Wilson School and the Economics Department of Princeton University, a position I have held since 1978. Before that, I was Supervisor in the Economics Research Department of

2. Bell Laboratories. My teaching and research have specialized in the fields of industrial organization, government-business relations, and welfare theory.

3. I served as Deputy Assistant Attorney General for Economics in the Antitrust Division of the Department of Justice (DOJ) from 1989 to 1991. I also served on the Defense Science Board task force on the antitrust aspects of defense industry consolidation and on the Governor of New Jersey's task force on the market pricing of electricity.

4. I am the author of *Welfare Analysis of Policies Affecting Prices and Products, Contestable Markets and the Theory of Industry Structure* (with William Baumol and John Panzar), and numerous articles, including "Merger Analysis, IO Theory, and Merger Guidelines." I am also a co-editor of *The Handbook of Industrial Organization*, and have served on the editorial boards of the *American Economic Review*, the *Journal of Industrial Economics* and the MIT Press Series on regulation. I am an elected Fellow of the Econometric Society and an associate of The Center for International Studies.

5. I have been active in both theoretical and applied analysis of telecommunications issues. Since leaving Bell Laboratories, I have been a consultant to AT&T, Bell Atlantic, Telstra, and New Zealand Telecom, and have testified before the U.S. Congress, the FCC, and the public utility commissions of about a dozen states. I have been on government and privately supported missions involving telecommunications throughout South America, Canada, Europe, and Asia. I have written and testified on a wide range of telecommunications issues, including

the scope of competition, end-user service pricing and costing, unbundled access arrangements and pricing, the design of regulation and methodologies for assessing what activities should be subject to regulation, directory services, bypass arrangements, and network externalities and universal service. On other matters, I have worked as a consultant with the Federal Trade Commission, the Organization for Economic Cooperation and Development, the Inter-American Development Bank, the World Bank, and various private clients. A full list of my articles and other professional publications and activities is presented in my *curriculum vitae*, which is attached as Exhibit A.

II. PURPOSE OF STATEMENT

6. I have been asked by EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation to address certain issues related to the proposed merger between EchoStar and DIRECTV (a subsidiary of Hughes), including the impact of the proposed merger on competition and consumers, and the degree to which there are merger-specific efficiencies that cannot be achieved in the absence of the transaction.

7. To summarize my analysis, which is based on information obtained from interviews of senior executives at both EchoStar and DIRECTV as well as from publicly available information, I conclude that (a) the relevant market for analyzing a merger between EchoStar and DIRECTV is no narrower than the Multi-Channel Video Programming Distributor (MVPD) market, and may be broader than that; (b) the proposed merger offers the possibility of

substantial efficiency improvements, especially in radio spectrum use, which would directly benefit DBS consumers by providing an expanded array of services (e.g., the provision of local broadcast programming to more metropolitan areas, more High-Definition Television channels, and more specialized programming), and also benefit an even broader group of consumers by creating a more effective competitor to cable providers than either company could be on its own; (c) the nature of competition in the MVPD market makes it very unlikely that a merger of EchoStar and DIRECTV would result in higher prices and lower output through either coordinated behavior among the participants in the MVPD market or unilateral behavior by the merged firm; (d) the proposed merger is more likely to be of distinct benefit to rural TV households than to diminish competitive benefits available to them; and (e) a merger between EchoStar and DIRECTV would not create or exacerbate any valid concerns the Federal Communications Commission (FCC) has about vertical integration because EchoStar and DIRECTV do not have any significant vertical relationships with programmers, and if anything, the merger could increase competition among program providers.

III. DELINEATION OF RELEVANT MARKET

8. A key step in the competitive analysis of any merger or acquisition is the delineation of the relevant market(s). In the case of a merger between EchoStar and DIRECTV, the relevant market is no narrower than the MVPD market, and may be broader than that.[1] The

[1] The MVPD market includes the cable industry and Direct Broadcasting Satellite (DBS) services. Other available MVPD services include home satellite dishes (HSD), multi-channel multi-point distribution service (MMDS), and private cable or satellite master antenna television (SMATV) systems. See *Annual Assessment of the Status of*

cable industry has been preeminent in the MVPD market.[2] Although Direct Broadcasting Satellite (DBS) providers have made significant inroads, cable firms still provided service for more than 77 percent of all MVPD subscribers in July 2001.[3]

9. The definition of a "relevant market" for the purpose of competition analysis of mergers depends crucially on demand substitution considerations – the degree to which consumers view the products as substitutable. In particular, the U.S. Department of Justice and Federal Trade Commission define a market "as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a 'small but significant and nontransitory' increase in price, assuming the terms of sale of all other products are held constant."[4] This ability to raise prices profitably is a function of the degree to which consumers view two products as providing similar services or benefits. If one firm came to become the sole provider of one of the products, but not the other, and if consumers found the products to be good substitutes, then the presence of the second product would prevent the firm from realizing an increase in profits by significantly raising its price. The second product would directly constrain the price of the first product, and the relevant market would therefore include the second product.

Competition in the Market for the Delivery of Video Programming, Seventh Annual Report, 16 FCC Rcd. 6005, 6008 (2001) ("Seventh Cable Competition Report"), at ¶ 3.

[2] Seventh Cable Competition Report at ¶ 5. The FCC stated: "Cable television still is the dominant technology for the delivery of video programming to consumers in the MVPD marketplace."

[3] See Comments of National Cable & Telecommunications Association, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated August 2, 2001), at ¶ 7.

[4] See Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/toc.html

10. The business behavior of the DBS industry indicates, and Federal government cases and studies, the views of the cable industry, and the views of independent analysts appear to confirm, that DBS prices are directly constrained by cable prices. Therefore, the relevant market for evaluating the merger of EchoStar and DIRECTV includes cable providers.

11. DBS pricing decisions appear to be driven by competition with cable companies. Executives at both EchoStar and DIRECTV confirm that the objective of each firm is to gain market share by luring consumers away from the leading cable providers, and the firms accordingly price their DBS programming services at levels based primarily on the prices charged by cable providers. In determining their prices, the companies collect detailed data on cable pricing of many systems and, as necessary, adjust their pricing to remain competitive on a national basis.[5] Moreover, the focus on cable providers, rather than the other DBS firm, is highlighted by DIRECTV's lack of response to EchoStar's recent "I Like 9" pricing strategy.[6] According to a DIRECTV executive, EchoStar's "I Like 9" package did not affect DIRECTV's pricing decisions because DIRECTV's focus is on obtaining new customers from cable providers, not the other DBS provider.

[5] When queried regarding their pricing decisions relative to the other DBS provider, executives at both EchoStar and DIRECTV indicated that they monitor the pricing of the other firm, but that such pricing plays little (if any) role in their own pricing decisions. The executives repeatedly emphasized that the primary determinant of their pricing was the price required to lure cable subscribers to DBS.

[6] In August 2001, EchoStar began its "I Like 9" pricing strategy. Under the plan, new customers who purchased an EchoStar satellite TV system for $199 or more received EchoStar's "America's Top 100" programming package for $9 per month for one year. (EchoStar usually charges $30.99 per month for the America's Top 100 programming package.) See EchoStar Communications Corporation, "DISH Network Announces New 'I Like 9' Promotion: Over 100 Channels of Satellite Television for Only $9 a Month," Press Release, July 31, 2001.

12. Consistent with the stated focus of DBS providers on attracting cable subscribers, it appears based on statements by executives of both EchoStar and DIRECTV that a majority of new DBS consumers had previously been cable subscribers. In addition, executives responsible for marketing and advertising at both EchoStar and DIRECTV emphasize that their campaigns are focused on convincing extant cable consumers that DBS offers a superior product. This emphasis on cable customers is corroborated by public statements by the cable firms themselves. For example, Cablevision observed in a recent FCC filing that:

> "The growth in DBS subscribers is due in part to the aggressive efforts of DIRECTV and DISH network to target Cablevision subscribers in their market efforts. For example, DISH network's recent ad campaign featured print ads entitled 'Save Money vs. Cablevision,' and direct mail, door hangers, and radio live-reads advising consumers that 'Cablevision is raising your rates again.' DIRECTV's 'Cable Bites' print ads feature side-by-side comparisons of tier pricing and number of channels."[7]

13. DBS pricing strategies thus appear to be directly constrained by the prices of cable providers, and therefore cable companies are part of the relevant market for analyzing this proposed merger. Such a position has been affirmed in a number of different cases and studies by the Federal government. In its 1998 complaint against Primestar, for example, the Department of Justice alleged that the MVPD market was the relevant product market and stated that:

> "Cable and DBS are both MVPD products. While the programming services are delivered via different technologies, consumers view the services as similar and to a large degree substitutable. Indeed, most new DBS subscribers in recent years are former cable subscribers who either stopped buying cable or downgraded their cable service once they purchased a DBS system. Cable and DBS compete by

[7] See Reply Comments of Cablevision Systems Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 3.

offering similar packages of basic and premium channels for a monthly subscription fee."[8]

14. The Justice Department noted that the cable industry had a distinct advantage because it could provide consumers with local broadcast services in local markets (the so-called local-into-local issue). Since the Justice Department's Primestar complaint, the Congress has allowed DBS providers to provide local-into-local services, which makes cable and DBS even closer substitutes than that suggested by the quotation above.

15. In its annual analysis of competition in video programming, the Federal Communications Commission (FCC) groups the cable industry and the DBS industry in the MVPD market.[9] In addition, the FCC concluded that "DBS distributors compete with a number of other MVPDs using different transmission media" and that "competitors in the MVPD market include cable operators, DBS operators," and other technologies, such as wireless cable operators.[10]

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[8] See *United States v. Primestar, Inc.*, Civil No. 1:98CV01193 (JLG) (D.D.C.) (May 12, 1998), at ¶ 63.

[9] See Seventh Cable Competition Report at ¶ 61. The FCC has also concluded that DBS and cable services are substitutes. In its 2000 *Report on Cable Industry Prices*, the FCC concluded that DBS puts statistically significant downward pressure on demand for cable services. The report continues to state that "DBS is a substitute for cable services. This result is different from our earlier finding reported in the *1999 Price Survey Report*, which showed DBS exerting only a modest influence on the demand for cable service. One explanation for the increased importance of DBS as a competitor of cable is the passage of the Satellite Home Viewer Improvement Act (SHVIA) in November 1999, which eliminated the prohibition on DBS delivery of local network signals into their local television markets. The two DBS operators have begun offering local signals in many major television markets thus more closely matching services provided by cable operators." See *Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment,* Report on Cable Industry Prices, FCC (2001), at ¶ 53.

[10] See *In re Application of MCI Telecommunications Corp. and EchoStar 110 Corp.*, File No. SAT-ASG-19981202-00093, FCC 99-109 (released May 19, 1999), at ¶ 15 and footnote 40. The U.S. Department of Justice (DOJ) agreed with the FCC's finding in the case. Specifically, the DOJ stated that "the transaction will greatly increase EchoStar's capacity to transmit video programming and will enhance its ability to compete aggressively and effectively against other distributors of multichannel video programming, including the cable companies that dominate these distribution markets." See Department of Justice, "Justice Department Urges FCC To Approve Direct Broadcasting Satellite Deal," News Release, January 14, 1999. Similarly, in response to a General Accounting Office study on the competition between DBS and cable, the FCC filed a comment that it was concerned

16. Although not itself a proof that cable prices constrain DBS prices, further evidence is provided by the fact that the cable industry itself views DBS as a significant competitor.[11] The CEO of Cox Communications, Inc., one of the largest cable providers in the nation, argued, "The satellite companies are very real, very serious competitors for our core business, and we take them extremely seriously."[12] Similarly, in testimony to the Senate Judiciary Committee, National Cable and Telecommunications Association President and CEO Robert Sachs stated that:

> "Before 1996, cable operators faced video competition primarily from over-the-air television, C-band satellite receivers, video rentals, and movie theaters. Direct broadcast satellite (DBS) competition has changed that forever. Being digital from the start, and having the advantage of substantially greater channel capacity, DBS spurred cable operators to replace hundreds of thousands of miles of coaxial cable with fiber optics so that they too could offer consumers hundreds of channels of digital video and audio services. In responding to vigorous competition from DBS, cable operators have made enormous investments in not just plant but computers, billing systems, personnel, and training – resulting in significant improvements in the quality of service we provide to our customers."[13]

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about the study's results because the FCC believed "that DBS penetration not only influences cable rates but also is influenced by them." See Comments from the Federal Communications Commission in General Accounting Office, "The Effect of Competition From Satellite Providers on Cable Rates," July 2000, page 40.

[11] Further confirmation that cable and DBS compete within a single market comes from Wall Street analysts. A number of analyst reports explain changes in DBS subscriber growth by actions taken by cable companies, and vice versa. For example, Merrill Lynch recently cited "aggressive digital cable rollouts" as a reason for the decline in projected DBS subscriber growth. See Merrill Lynch: "Eye in the Sky: 3Q01 Preview," October 8, 2001, page 2. Similarly, Goldman Sachs argued that "Increased competition from cable operators not only has the potential of increasing churn of DIRECTV ("winning back" cable subscribers), but also affecting the amount of gross subscribers the company adds." See Goldman Sachs, "Hughes Electronics Corp.," September 18, 2001, page 2.

[12] See Christopher Stern, "Cable's Satellite Wars: Communications Giants Are Waging A Multibillion-Dollar House-to-House Battle for Subscribers," *The Washington Post*, August 13, 2000, page H01.

[13] Robert Sachs, Testimony Before Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, United States Senate, April 4, 2001, pages 2-3. The National Cable and Telecommunications Association (NCTA) further argued, "Today consumers nationwide may turn to direct broadcasting satellite ("DBS") as a fully substitutable alternative to cable for MVPD service." See Reply Comments of National Cable & Telecommunications Association, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 1-2. In addition, Daniel Brenner of NCTA wrote to the General Accounting Office that "Cable operators have responded to competition from DBS in a variety of ways that increase the value of their services to customers." These include: (1) DBS's far greater channel capacity has spurred cable operations to increase the number of

17. Cable companies have also stated that their pricing decisions and advertising strategies are influenced by competition from DBS providers. AT&T has argued that, "Cable operators' behavior reflects the significant marketplace constraints imposed by DBS."[14] In addition, AT&T Broadband has focused entire advertising campaigns on luring DBS customers back to digital cable – underscoring AT&T's apparent belief that digital cable is a substitute to DBS.[15] Furthermore, in explaining a recent pricing decision, a general manager of a New England cable company said that "We have sought to strike a balance between the need to offset some of our increased programming costs, and the need to price our products competitively against DIRECTV and other satellite providers."[16]

18. Based on the evidence presented above, I conclude that the cable industry should be included in the relevant market for analyzing a merger between EchoStar and DIRECTV. Moreover, markets are dynamic and the boundary of the market in which DBS providers compete with cable operators may be expanding. For example, as bundled packages with digital

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channels they provide; (2) cable operators have improved reliability and added new services; and (3) operators have introduced new program packaging options. See Comments from the National Cable and Telecommunications Association in General Accounting Office, "The Effect of Competition From Satellite Providers on Cable Rates," July 2000, page 44.

[14] See Comments of AT&T Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated August 3, 2001), at 12.

[15] In a November 2001 AT&T Broadband television commercial, a woman states that "so, with this basic satellite plan, we have to share a receiver? The service man replies, "well, look on the bright side, ma'am. While your husband's watchin' sports in the den, you'll have sports in your room, you'll have sports in the kids' room, and you have sports right here in the kitchen. Be like a sports bar." The announcer then says, "with satellite, additional TVs are a problem. Different channels on different TVs at the same time. No extra equipment to buy. Problem solved. Digital cable from AT&T Broadband." Campaign Media Analysis Group, "AT&T Broadband Sports," November 2001.

[16] Lisa Marie Pane, "Cox To Increase Cable Rates Statewide," *Associated Press State and Local Wire*, July 10, 2001.

television, high-speed Internet access, and video-on-demand become relatively more important in the MVPD market, the participants in the relevant market may well grow beyond the historical MVPD participants – which include cable firms, DBS providers, "overbuilders," C-Band providers, private cable or satellite master antenna television (SMATV) systems, and multi-channel multi-point distribution service (MMDS) providers – to include DSL providers, incumbent phone companies, and cellular phone providers. As technologies evolve, the distinction between "video" and "data" services may become increasingly blurred (e.g., video could increasingly be delivered over the Internet, and broadband data services could increasingly be delivered via satellite). To be sure, predicting the future course of the industry is extremely difficult and the market structure may develop in ways that are unanticipated today. Nevertheless, cable and DBS operate in a dynamic market and the relevant market may extend beyond the current MVPD industry.

19. Finally, for the purposes of evaluating the competitive impact of the proposed merger, the national pricing for monthly subscription and programming fees by both EchoStar and DIRECTV suggest that a national-level analysis is the most appropriate (see below for further discussion of the competitive effects of the proposed merger).

IV. MERGER-SPECIFIC EFFICIENCIES

20. The evidence that I have examined shows that the merger offers substantial efficiency benefits, especially in radio spectrum use.

21. Spectrum has become an increasingly scarce resource as the number of commercially viable uses of the spectrum has expanded over the past several decades. Both DBS firms indicate that each is making full use of its current spectrum to provide its existing services, and the prospects for the DBS industry to receive additional spectrum in the next few years are small. Therefore, improving the efficiency with which the DBS sector uses its spectrum is the only viable way for additional spectrum-intensive services to be provided to DBS customers. Such efficiency improvements would directly benefit DBS consumers by providing an expanded array of services, and also benefit a broader number of consumers by increasing competition with the cable industry. Both EchoStar and DIRECTV emphasize that the potential for additional improvements in spectrum efficiency by each firm individually is minimal. Future spectrum efficiency improvements must therefore reflect the elimination of redundant DBS spectrum use or some technological advance that is not currently anticipated by the DBS industry.

22. In the DBS industry, most of the communication is one-way and the marginal consumer requires virtually no additional spectrum.[17] In other words, unlike some other uses of spectrum, doubling the number of DBS consumers receiving one-way services requires essentially no increase in spectrum. Currently, EchoStar and DIRECTV each broadcast many identical cable channels and broadcast station feeds – that is, they both use spectrum for identical programming (e.g., CNN, HBO, local network affiliates, etc.). Such programming could be

[17] The trivial increase in spectrum requirements reflects the need to transmit instructions to the set-top box regarding the relevant service package. The amount of spectrum required for such purposes is extremely small.